Appl. No. 10/708,700
Amdt. dated August 31, 2005
Reply to Office action of June 02, 2005

REMARKS

1. **Claims 1-26 are rejected under 35 U.S.C. 112**

In claim 1, the recitation "the off-state" on line 10 lacks clear antecedent basis. The
5   **same is true for claims 7, 14, and 20:**

Applicant has modified claims 1, 7, 14 and 20 to change "off-state" to "when the
first switch element is switched off". No new matter is introduced by these amendments.

10   **It is unclear what the off-state and "predetermined charge voltages" are, where they**
come from and how the voltage difference can approach the predetermined charge
voltage:

Applicant has further modified claims 1, 7, 14 and 20 to more specifically describe
15   that the third node is at a first predetermined charge voltage, and that the charge circuit
couples the first node to the third node when the first switch element is switched off to
thereby control a voltage at the first node to approach a second predetermined charge
voltage.

With reference to Fig. 5 of this application, the first predetermined charge voltage is,
20   for example, VDD.   The second predetermined charge voltage is, for example,
$VDD-V_{510}-V_{508}$ when the first switch element (such as 504) is switched off.

In this way, applicant believes it is now clear where the predetermined charge
voltage comes from (ie, the third node) and how the voltage at the first node can approach
the second predetermined charge voltage (ie, the charge circuit couples the first node to
25   the third node). No new matter is introduced by these amendments.

In claim 3, the recitation "third switch" on line 5 is confusing because "second
switch" is not seen in the claim. The same is true for claim 16:

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Applicant has replaced the term "third switch" with "second switch" throughout the claims. Claims 3, 5, 6, 9, 11, 12, 16, 18, 19, 22, 24, and 25 are amended in this way. No new matter is introduced by these amendments.

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In claim 4, the recitation "or" on line 3 is indefinite because it does not positively recite the claimed invention. It is not understood how the diode can be "formed by a transistor having the base and the collector or the gate and the drain being shorted together and how this limitation is read on the drawings. Insofar as understood, no

10   **such limitation is seen on the drawing. The same is true for claims 10, 17 and 23:**

Claims 4, 10, 17, and 23 are amended to correct grammatical errors that may have made the meaning unclear. For example, as is illustrated in Fig.5 of the present application, a diode can be formed by a transistor having the base and the collector

15   of the transistor being shorted together in the case of a BJT type transistor, or if the gate and the drain are shorted together in the case of a MOS type transistor. No new matter is introduced by these amendments.

2. Claims 1-2 are rejected under 35 U.S.C. 102e as being anticipated by Mullarkey et

20   **al (US 6,661,693):**

Applicant has amended claim 1 to include the limitation that the switched capacitor is connected to an oscillator. Mullarkey does not mention any oscillator. Therefore, with the added limitation, the 102(e) rejection should be overcomed. Moreover, it is

25   unobvious to apply the circuit of Fig. 2 disclosed in Mullarkey to an oscillator because the operation principle of Mullarkey's circuit, which is an anti-fuse circuit, is far different from that of the application's circuit, which is used for oscillation. Therefore, there is no motivation for one skilled in the art to combine Mullarkey with any oscillator. Claim 1

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of this application is both novel and unobvious.   Claim 2 is dependent from claim 1.   If claim 1 is found patentable, claim 2 should also be patentable.

3. Applicant further adds new claims 27-38, of which only claim 27 and claim 32 are
5   **independent claims.**

Claim 27 includes all the limitations of the original claim 1 and the original claim 2. Although Examiner did not specifically indicate that the original claim 2 would be allowable, it is similar to the original claim 15, which was found allowable by the
10   examiner. Applicant points out that in Fig.2 of Mullarkey et all (USPN: 6,661,693) the drain transistor 202 is controlled by a signal PGMPCHRG, while the selection transistor ST_i is controlled by the output of the NOR gate 201. This operation is further explained by Mullarkey et al. in Col 3, lines 59-64, "In operation, each node TN_i for i=0, 1, ...n is precharged to zero volts just prior to beginning of a programming operation when the
15   signal PGMPCHRG enables transistor 202 to connect node TN_i to ground. When programming is to occur, the output of NOR gate 201 enables selection transistor ST_i for each antifuse element to be programmed."
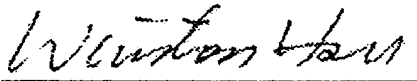
The described operation of the integrated circuit 200 taught by Mullarkey et al. is
20   therefore in contrast to the operation of the present invention as claimed in the newly added claim 27, namely that the first node is coupled to the third node according to the control signal that also controls coupling the first node to the second node. Mullarkey et al. teach that the TN_i node is precharged just prior to being of a programming operation. In the present application, the same control signal is utilized to control the first switch
25   element and the charge circuit so the first node is charged when the first switch element is switched off. No new matter was introduced by the newly added claims 27-38. Applicant asserts that the newly added claims 27-38 should be found allowable over the teachings of Mullarkey et al for at least the above reasons. Consideration of the newly added claims

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27-38 is respectfully considered.

Sincerely yours,

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